Wireless Thermostat Installation Guide

Supported Models and Requirements

CCZ-T1-W Wireless Thermostat - White

Important Safety Instructions

WARNING! Install in accordance with all national and local electrical codes.

WARNING! This product is not intended for use with line-voltage baseboard heaters.

IMPORTANT! Improper use or installation can cause LOSS/DAMAGE OF PROPERTY.

IMPORTANT! Operate within limits of this device as specified in this *Control4 Wireless Thermostat Installation Guide* and the *Control4 Wireless Thermostat User Guide*.

IMPORTANT! Using this product in a manner other than outlined in this document voids your warranty. Further, Control4 is NOT liable for any damage incurred with the misuse of this product. See the warranty information in the *Control4 Wireless Thermostat User Guide*.

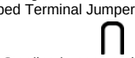
General Description

This thermostat enables intelligent HVAC control as part of a Control4 automated system. It uses the ZigBee (802.15.4) wireless networking standard to communicate with the Control4 system.

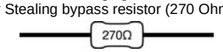
The Control4 Thermostat features a backlit LCD display showing time, temperature, date, fan status, hold status, and HVAC operating mode. The front panel allows for temperature setpoint adjustment, HVAC mode change, variable hold options and fan control. It can also operate as a stand-alone set-point thermometer if it loses communication Control4 with the system.

What is in the Box

- Thermostat
- CR123A (3V) Battery
- 3 Screws (#6 x 1 inch sheet metal screws)
- 3 Plastic wall anchors (#4-6 x 7/8")
- Product Registration Card
- U-shaped Terminal Jumper Wire



- Power Stealing bypass resistor (270 Ohm)



- Control4 Wireless Thermostat Installation Guide
- Control 4 Wireless Thermostat User Guide

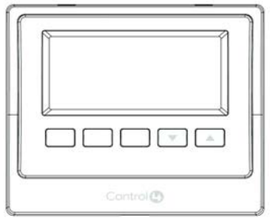
Requirements

- Pencil (#2 or darker)
- Drill with 3/16" drill bit
- Small Level (optional)
- Small flat-blade screwdriver
- Phillips screwdriver
- Tape for labeling wires

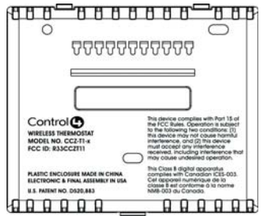
Specifications

Front and Rear View

Face Plate



Rear Plate



The specifications are described as follows.

Recommended Wiring:	22 AWG (36 ft. max) 18 AWG (100 ft. max)
Power Source:	24 Volt and 3 Volt battery
Power Usage:	1/10 W at 24 VAC, 50/60 Hz
Set Point Temperature Range:	40 F to 90 F (5 C to 32 C)
Operating Temperature:	39 F to 131 F (4 C to 55 C)
Storage Temperature:	14 F to 185 F (-10 C to 85 C)
Operating Relative Humidity:	0 to 95% (non-condensing)
Dimensions (HxWxD):	4.5 x 3.7 x 1.2 inches
Communications:	ZigBee (IEEE 802.15.4) 2.4 GHz, 15-channel, spread spectrum radio

IMPORTANT! By default, this thermostat is configured to utilize "power stealing". Please verify that your HVAC system supports power stealing prior to installation in this mode. Changing this setting is described in Step 14.

NOTE: The Wireless Thermostat requires power from the HVAC system to maintain regular communication with the controller. The battery is intended to provide supplemental or backup power only.

Installation

1 Place the thermostat in a good location (see items below) to ensure its efficiency and avoid unnecessary cycling of the furnace or air conditioner.

- Place the thermostat and optional external thermostat sensors away from direct sunlight, drafts, exterior doorways, skylights, windows, and exterior walls.
- Make sure the thermostat gets good ZigBee wireless reception: (1) Ensure that the thermostat is within 150 feet of another Zigbee device. (2) Avoid having electrical equipment that may cause interference with the Zigbee signal (such as cordless telephones that operate on the 2.4 GHz frequency).

2 Locate and turn OFF the power supply for the HVAC system.

3 If installing a thermostat in a new location, refer to "Sample Wiring Configurations" on page 2 for details on wiring the thermostat and then skip to Step 5.

4 If replacing an existing thermostat:

a. Check the number and type of wires attached to your old unit.

b. When you are sure the power has been shut off, remove the old thermostat's cover from its rear plate, but do not disconnect any wires yet.

c. Unscrew and remove the old thermostat's rear plate from the wall; If the old thermostat has a letter identifying each wire, use a piece of tape to label each wire that corresponds to the letter on the old thermostat and ensure they don't fall back into the wall.

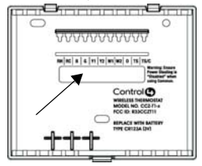
d. Disconnect the old thermostat.

CAUTION! Discard the old thermostat properly or recycle it. Mercury is a hazardous waste. You MUST dispose of it properly.

5 Detach the rear plate from the Control4 Wireless Thermostat. (Press the release clip at the bottom of the thermostat to release it and swing the bottom up.)

6 Thread the wires from the wall through the large rectangular opening in the new rear plate (Figure 1), then position the new rear plate against the wall to make sure it sits flush.

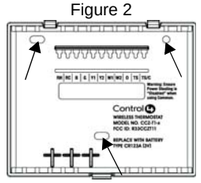
Figure 1



7 Use a small level or visually check that the rear plate is level, then mark the locations of the three screw holes on the wall (Figure 2).

8 Remove the rear plate from the wall and drill 3/16-inch-mounting holes at the three screw hole locations you marked previously.

Figure 2



9 Press the plastic wall anchors (included with the product) into the holes you drilled in Step 8.

10 Re-thread the wires from the wall through the rear plate of the new thermostat to place the rear plate against the wall (Figure 1).

11 Insert the mounting screws (included with the product) into the plastic wall anchors and firmly tighten the screws.

12 See "Sample Wiring Configurations" on page 2 to determine the appropriate wiring connections for your system configuration.

13 Connect the wires to the screw terminals in the rear plate, matching the labeled wires (Step c.) to the letters on the terminals. The wiring can differ depending upon the wires available.

14 Select the desired power supply method by enabling or disabling **Power Stealing** on the back of the thermostat faceplate.

- Enable (default) = The thermostat steals a small amount of power from the HVAC system transformer to power itself.
- Disable = Power Stealing is disabled and the thermostat requires the HVAC "common wire" connection for a dedicated power supply.

15 On the back of the thermostat faceplate, set the slide switches that sit next to the battery compartment to match your system:

a.	Set the Mode (bottom) switch to select a system type.	
	Conventional:	Set for Conventional heating and cooling systems (default)
	Heat Pump:	Select for Heat Pump systems
b.	Set the Primary (middle) switch to select primary stage fan control.	
	Fuel:	Gas or oil furnace equipment controls fan in heating (default)
	Electric:	Thermostat controls fan in heating
c.	Set the Secondary (top) switch to select secondary stage fan control.	
	Fuel:	Gas or oil furnace equipment controls fan in secondary stage heating (default)
	Electric:	Thermostat controls fan in secondary stage heating

16 Install the CR123A (3V) battery (included with the product) in the Control4 thermostat faceplate according to the polarity labels, POS (+) and NEG (-), on the thermostat circuit board.

IMPORTANT! Do not install the battery in the wrong polarity.

IMPORTANT! If the battery was in place and you changed slide switch settings, remove the battery and reinstall it. This forces the thermostat to reboot with the new configuration.

17 Install the faceplate to the thermostat rear plate. To do this:

1. Align the faceplate with the rear plate and push the straight pins to the back of the thermostat.

2. With the faceplate slightly above the rear plate, slide the top edge of the faceplate onto the rear plate, engaging the plastic hooks with the corresponding holes.

3. Press firmly on the bottom center edge of the faceplace to snap and lock the bottom hook in place.

18 Turn ON power supply for the HVAC system.

19 Test the thermostat in both the auto and manual modes to confirm that the furnace and air conditioner cycle on and off at the appropriate settings. To operate it, see *Control4 Wireless Thermostat User Guide*.

Programming Instructions

As part of a Control4 system, the thermostat can follow a schedule with up to six different set points per day. You can also control the thermostat using the Wireless Touch Screen, the On-Screen Navigator (on your TV), the Mini Touch Screen, or the LCD Keypad. (See the *Composer Online Help* for programming instructions, and see the *Control4 Wireless Thermostat User Guide* for programming instructions using one of the navigation devices).

Troubleshooting

If thermostat is not working:

- Ensure HVAC system is not turned OFF.
- Check for proper wiring. (See "Sample Wiring Configurations" on page 2.)

For help on the installation or operation of this product, email or call the Control4 Technical Support Center. Please provide your exact model number. Contact support@control4.com or see the web site www.control4.com.

Regulatory Compliance

This product complies with standards established by the following regulatory bodies:
Federal Communications Commission (FCC) and Industry Canada

FCC

FCC ID: R33CCZT11. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

IMPORTANT! Changes or modifications not expressly approved by Control4 void the user's authority to operate the equipment.

Industry Canada

This Class B digital apparatus complies with Canada ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

Recycling

For information on recycling, please go to wwww.control4.com/recycling

Sample Wiring Configurations

WARNING! Do not install LINE VOLTAGE wires to a LOW VOLTAGE wire.

IMPORTANT! When utilizing power stealing, we recommend installing the included 270 Ohm bypass resistor on the HVAC system to minimize any potential side-effects. For additional information on power stealing and installing the bypass resistor, visit control4.com.

IMPORTANT! Do not install any REMOTE TEMPERATURE SENSORS to the TS terminals other than supported external temperature sensors (Flush Mount Remote Temperature Sensor, Aprilaire™ Model 8051; or Duct/Outdoor Remote Temperature Sensor, Aprilaire Model 8052). For installation instructions, see Aprilaire documentation.

IMPORTANT! Install the U-shaped Terminal jumper wire between RC and RH for a single stage system.

Wiring Connections

Terminal	Description
RH	24VAC power for heating — connect to low voltage heating system transformer. (See Note 1 below.)
RC	24VAC power for cooling — connect to low voltage cooling system transformer. (See Note 1 below.)
B	*Conventional* — heat damper control *Heat Pump* — heat changeover valve
G	Fan Relay
Y1	*Conventional* — air conditioner compressor *Heat Pump* — primary stage relay
Y2	*Conventional* — 2nd stage compressor *Heat Pump* — 2nd stage relay
W1	*Conventional* — heat relay *Heat Pump* - auxiliary heat relay
W2	*Conventional* — 2nd stage heat relay *Heat Pump* — not used
O	*Conventional* — cool damper control *Heat Pump* — cool changeover valve
TS	Remote sensor (optional accessory)
TS/C	Remote sensor (optional accessory) Common wire return for dedicated power supply.
Note 1: Install the U-shaped Terminal jumper wire provided between RC and RH for a single stage system. **Note 2**: When connecting the common wire, ensure that power stealing is disabled as described in step 14.	

Warranty

For complete warranty information, including details on consumer legal rights as well as warranty exclusions, visit www.control4.com/warranty.

About this Document

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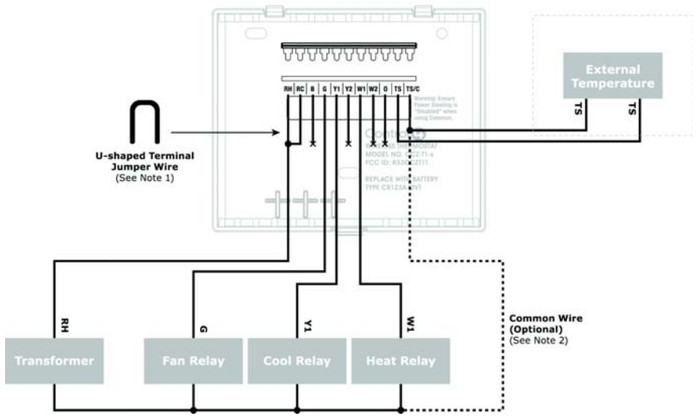
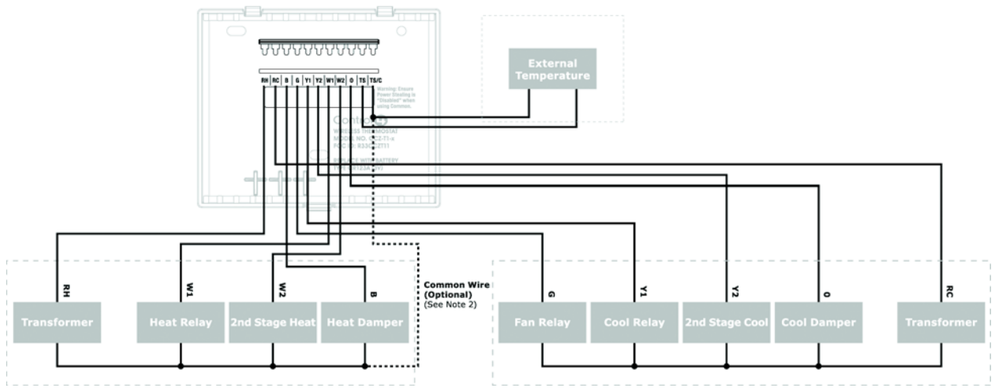
Part Number: 21-0170 Rev C (3)

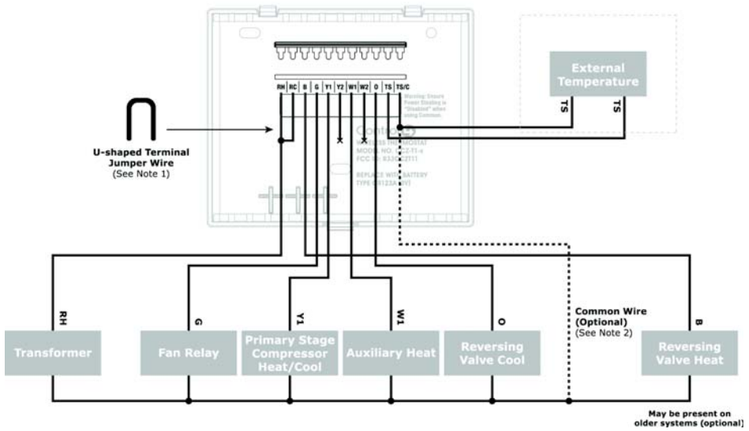
Conventional - Single Stage



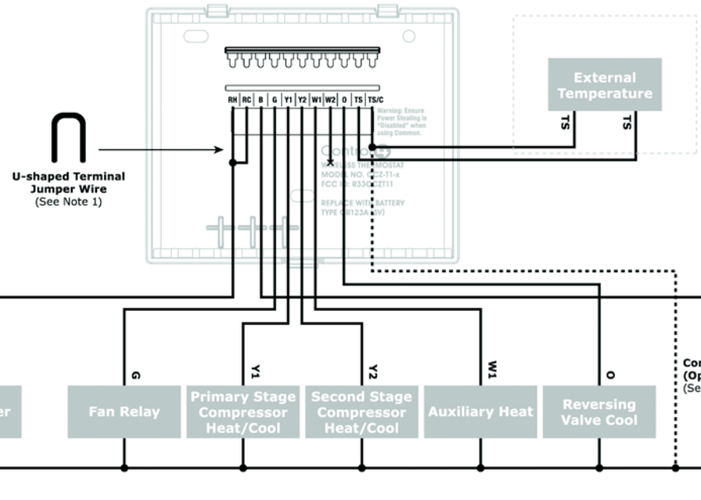
Conventional - Dual Stage



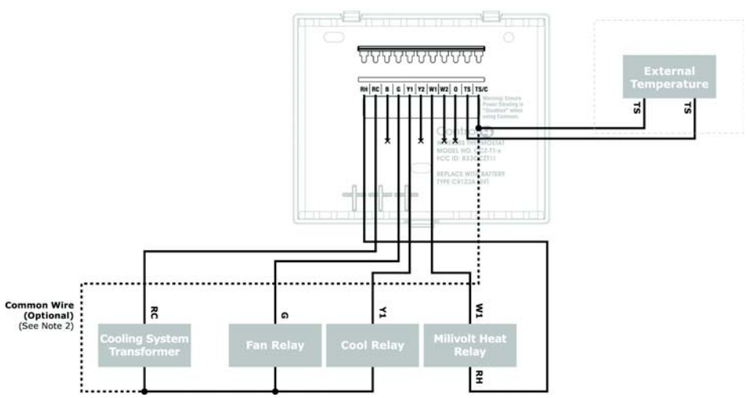
Heat Pump - Single Stage



Heat Pump with Electric Auxiliary Heat - Dual Stage



Milivolt Heat, Conventional Cool – Single Stage



Heat Pump with Electric Auxiliary - Dual Stage, Dual Transformer